

Can Exercise Protect an Organization's Investment in Police Officers?

By David Allison

The air was warm as it rushed through the open window of the police cruiser. It was near midnight and Officer Jones had just finished eating his usual meal at Mel's Diner, a cheeseburger and a healthy portion of chili-cheese fries, all washed down with several cups of coffee. Jones was feeling good when he heard the familiar crackling of the radio, "Seven-Paul-twenty-nine, suspicious circumstances at 2390 Elm Street. Subject is standing out front with no clothing on yelling at a tree in the front yard." Jones thinks to himself, "this is probably just some goofball screwed up on PCP..." as he acknowledges dispatch and turns his police car towards the call.

Jones beat partner, Officer Phillips, advises dispatch "Seven-Paul-twenty-eight copy the call on Elm, I'll respond for back-up." Unlike Jones, Phillips arrived at the station early as usual to complete his workout. He had not yet had lunch, but carried an ice chest full of fruit and healthy snacks in the trunk of his cruiser to keep his energy level up in the field. Jones and Phillips came out of the academy together, although their culinary habits were quite different. "Hey, why do you bring all that crap with you to work every day?" Jones would ask. "I just don't like eating heavy meals during the night. It slows me down, and I don't like the bad guys getting away from me." Jones retorted, "Phillips, look at me, I might be a little overweight and out of shape, but I can talk a guy into the backseat of my cruiser any day. Who needs to do all that running and weight lifting? You're just wasting your time." In a very few moments, both Jones and Phillips will be able to reflect on that conversation and their respective lifestyles, in a call for service that changed both of their lives.

At Jones' and Phillips' destination, Jesse James was the subject about whom the neighbors had called the police. Jesse started using PCP when he was thirteen; at twenty-

one, he has become accustomed to using regularly to forget the fact he wasted the best years of his young life in prison. Jesse never even saw the first cruiser as it pulled to the curb a couple of houses down the street. He was startled when Officer Jones asked him what he was doing yelling at that innocent tree. Suddenly, Jesse charged Jones and tackled him. Jones fought desperately to get Jesse off of him and gain control; his breathing became labored and his muscles seemingly failed him when he needed them the most. Jones had gone from zero to sixty in a moment, and was now fighting for his life.

As Phillips arrived, he saw the violent struggle between Jones and Jesse. Phillips jumped out of his car and ran over to the sweaty heap of flesh tussling about on the grass. Phillips quickly used the control holds he had practiced over and over again in the police academy to restrain Jesse and place handcuffs on him. After handcuffing Jesse, Phillips looked down at Jones and asked, "Jones, you alright?"

Jones relied, "I don't feel so good; I can hardly breathe, and I feel like I'm going to pass out." Jones barely survived the battle, but eventually lost the war against the years he had neglected his own health. In a medical exam following the fight, doctors diagnosed cardiac disease and recommended Jones leave the stress of his chosen profession or face the prospect of death the next time he had to exert himself.

"Twenty-one years on the job, and now I have to retire early. How am I supposed to live on 50 percent of my salary?" Jones asked when he saw Phillips in the station. "I don't know buddy, but I wish you the best of luck." Shaking his head, Jones said, "Hey Phillips, I guess I should have listened to you a long time ago about keeping myself in shape. Maybe my heart would have held up a little better."

While this story is fictional, there are Officer Jones' in every law enforcement organization in every state of our nation. Losing the battle with a suspect due to a lack of cardiovascular endurance, flexibility, or upper body strength may not be career or life ending, but certainly can be. The day-to-day "red flags" are easy to ignore; that flight of stairs started to wind Jones as he climbed them, his uniform needed replacement every year or so because it didn't fit anymore, he sweated in cool environments. He even became dizzy when he laughed real hard, something he waved off as "no big deal." These and hundreds of other day-to-day warning signs that were ignored are what ended Officer Jones' career. Sadly, in a career devoted to fighting bad guys, he lost the battle with himself.

THE PROBLEM

Law enforcement is a unique profession in terms of the many physical, emotional and psychological challenges experienced by its practitioners. In a twenty-five to thirty year career, police officers will experience things that no human being should ever have to see or do. These experiences can have a profound physical, psychological and emotional impact on law enforcement officers. Though the average day for a police officer or deputy may be generally sedentary, the calmness of the moment can be interrupted in the blink of an eye. This chasm between calm and terror causes police officers to live in a constant state of heightened awareness and stress. There are very few professions forced to live with this type of stress on a daily basis. Law enforcement is not engaged in physical confrontations daily, however they are expected to respond to high stress, high demand situations in a split second without making a mistake. This type of physical and psychological stress combined with the stress of seeing people at their

worst, and the horrible results of various crimes is what makes law enforcement unique from other professions.

Stress also has a significant effect on health, and police officers face stress on a daily basis by the sheer nature of their jobs. Research has identified at least fifty-three stressors related to the law enforcement profession, which places police officers at a higher risk of heart disease, obesity, arthritis, ulcers, and cancer.² The State of California Labor Code has identified several of these previously mentioned diseases as “presumed injuries” for law enforcement officers. In fact, these legal presumptions now include heart trouble, cancer, hepatitis, hernia, meningitis, pneumonia, tuberculosis, and lower back problems.

According to a panel of experts speaking at Experimental Biology 2004, “Reports on new understandings of the mechanisms and pathways through which the body's hormonal response to stress alters immune system function and influences susceptibility, onset and exacerbation of mental and physical diseases, including atherosclerotic heart disease, depression, infectious diseases, and autoimmune diseases such as multiple sclerosis.”¹ The stress officers and deputies face goes beyond their unusual experiences and daily duties. Officers are under constant scrutiny from the public, media and leadership of their own organizations, which adds to stress levels, and in turn can have an impact on physical health. The primary health issues officers face due to the job related stress is; low back injuries, obesity, heart problems, and diabetes.

The special equipment required to be worn by officers can be problematic and a double-edged sword. Patrol officers wear ballistic vests and duty gun belts that are weighed down with heavy equipment. The ballistic vest is generally uncomfortable and

can put pressure on an officer's neck and shoulders, which in turn puts stress on the skeletal structure. A typical duty belt can weigh anywhere from twenty to thirty pounds and places significant strain on an officer's lower back. When combining the physical stressors of this equipment with the quick and unexpected response to stressful situations, the potential for injury is enormous. Maintaining a balanced exercise routine of strength, flexibility and cardiovascular fitness is essential to minimizing this risk.

Since law enforcement is mostly sedentary in nature (interspersed with occasions of extreme physical exertion), obesity or just being overweight can be a very real challenge for officers. The Director of the CDC, Dr. Julie Gerberding, says obesity is a serious health threat, and being overweight can lead to diabetes, heart attacks and cancer, any one of which can shorten or end a law enforcement career.² Diabetes has more than doubled between 1980 and 2004 - from 5.8 to 14.7 million people in the United States according to the U.S. Center for Disease Control. Approximately one in three Americans has high blood pressure, and about sixty million Americans are considered obese.³ Each of these diseases are prevalent in the law enforcement ranks due to the high stress, high demand occupation. Each of these diseases also touches the lives of many in the United States, but the average American does not face the same traumatic experiences an officer will face throughout their career. Obviously these diseases can manifest themselves due to a variety of reasons, including stress.

Family medical history, smoking, poor eating habits, and shift work are a recipe for the onset of heart disease, diabetes and obesity. Heart disease is a common problem in America today. One cannot change family history; however eating healthy, exercising and ensuring adequate sleep can reduce the risks of this often-fatal disease. According to

a report from the National Vital Statistics, the average life expectancy in the United States to be approximately 77 years of age. However, a forty-year study of retired male police officers from 1950 to 1990 found their average life expectancy to be 66 years of age.⁴ This information suggests a significant disparity in the age of mortality between the average population and that of police officers. Unfortunately, the nature of law enforcement with shift work, high stress, poor eating habits (fast foods), and the lack of physical exercise increases the risk of police officers developing these debilitating and often-fatal diseases. Beyond these diseases is another silent killer of law enforcement often overlooked.

This silent killer of law enforcement officers, frequently brought on by job related stress, is suicide. A study conducted between 1985 and 1999 with the New York PD, Chicago PD, FBI, Los Angeles PD, San Diego PD, and U.S. Customs found that the suicide rate among officers was between 29 and 280 percent higher than the national averages.⁵ Law enforcement operates daily under the microscope of society with everyone second-guessing his or her actions. Officers are asked to make life and death decisions in split seconds while those watching have years to evaluate the officer's actions. The strain of this scrutiny combined with the daily duties of dealing with people in crisis and at their worst can lead to depression and isolation from society. Keeping officers physically healthy is important, but offering counseling and peer support is just as important to combat this silent killer. Suicide and medical problems associated with stress are not the only concerns for law enforcement.

All of these problems are of great concern to the law enforcement profession. What makes law enforcement different from other professions can best be summed up in

a famous poem by an unknown author. The poem, “Tears of a Cop,” in the first paragraph explains a great deal about the stress officer’s face that others in society never will:

I have been where you fear to go...

I have seen what you fear to see...

I have done what you fear to do...

All these things I've done for you.⁶

SOLUTIONS

One of the most effective ways to battle stress and keep one’s mind sharp is through a regular exercise routine. The Cooper Institute in Dallas, Texas suggests police officer physical fitness relates to the ability of officers to perform essential job functions, minimizes the risk of excessive force situations and minimizes known health risks associated with law enforcement.⁷ Keeping physically fit is one component of the equation. Just as important is the ability to maintain a high cognitive ability as one ages through a law enforcement career.

Dr. Arthur Kramer of the Beckman Institute, University of Illinois, believes physical fitness can translate to enhanced brain and mental function. Dr. Kramer found that walking as little as two or three miles a week can keep one’s mind sharp. During a six-month study, Dr. Kramer had older adults participate in two separate exercise regimes. Half of the group did stretching and toning exercises while the others engaged in aerobic fitness exercises like walking. Each group participated several days a week in their particular exercise routine. At the end of six months it was found those who focused on aerobic exercise had better cardiovascular health, and their attention ability

was better than the stretching and toning group.⁸ Dr. Kramer noted, “The aerobic group had better blood supply and activity in part of the brain that deals with attention.”⁸

For a peace officer, keeping one’s mind sharp and alert can prevent mistakes that can cost an organization in injuries to officers and litigation costs. Maintaining good health through physical fitness can prevent injuries and mental mistakes. Law enforcement has seen the need to establish entry-level physical fitness requirements; unfortunately those standards often go by the wayside after the initial hiring phase.

California law enforcement has established physical standards, which are recommended by the State of California’s Commission on Peace Officer’s Standards and Training that must be met prior to employment. However, once a police officer has established employment the fitness standards are not generally required to be maintained in most law enforcement agencies. Additionally, very few law enforcement agencies have physical fitness programs; those that do are generally voluntary and unmonitored.

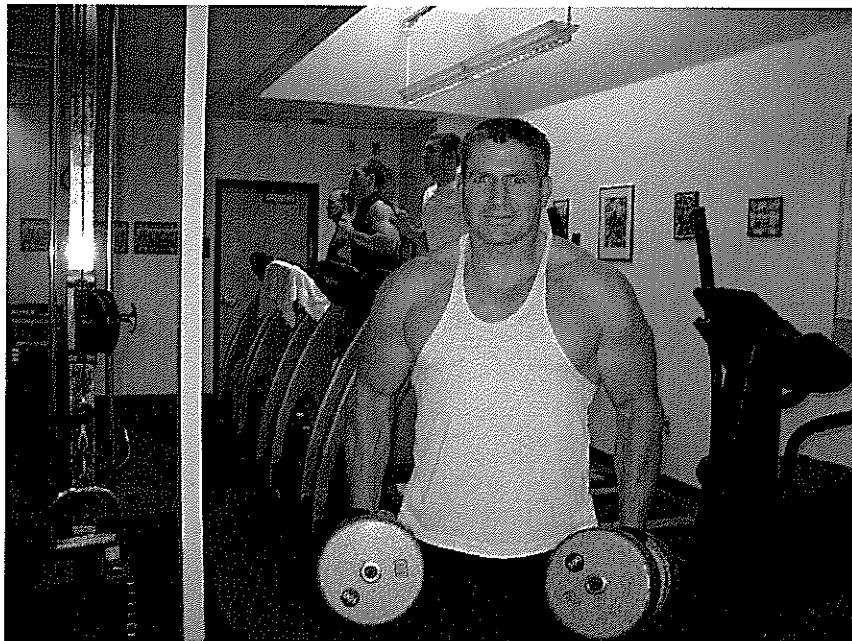
Imagine reducing health care costs, workers’ compensation costs, and absenteeism while improving productivity, employee recruitment and retention, and the morale of employees. Lowering health care cost and workers’ compensation costs alone would have an enormous impact on the State of California’s budget, which in turn would have a positive impact on local budgets. Can it be done? One law enforcement agency seems to think so.

FITNESS PROGRAM CASE STUDY

The City of Roseville, California is one of the fastest growing communities in the State of California. The city’s population has grown exponentially over the past ten years and is now the home to over one hundred thousand people. The Police Department’s

sworn staff has grown from less than 40 officers in the late 1980's to more than 130 officers currently. Like many law enforcement agencies, Roseville was faced with increasing numbers of injured officers, which in turn increased the workers' compensation claims and costs. In 1997 the City and Department began to explore and develop a fitness program for sworn officers. A fitness committee comprised of the Risk Manager, Training Analyst, Roseville Police Officer's Association Representatives, and department management staff outlined what is currently the department's "Mandatory Physical Fitness Program." The goals established by the committee were:

- To reduce workers' compensation claims and costs
- To reduce the use of sick leave by police officers
- Improve employee retention
- Improve the health and wellness of police officers
- To reduce on-duty injuries and disability retirements



The Department was in an ideal situation in 1998 as it moved into a new police headquarters facility with the necessary space to outfit a gym facility on-site. The gym was outfitted with a variety of equipment, both aerobic and strength conditioning. Sworn staff is given one hour at the beginning of their shift to exercise, forty minutes to exercise and twenty minutes to shower and prepare for briefing. While priority calls for service are generally the only thing that may require officers to skip a workout and proceed directly to the field, the fitness program is a priority. Beyond the equipment and scheduling necessary to establish a fitness program there are additional details to consider.

A policy was developed and a written agreement drafted between the City and Police Officer's Association. The City also employed the services of a Fitness Coordinator who holds a Masters Degree in Exercise Physiology and is certified through the American College of Sports Medicine as an Exercise Test Technologist. The Fitness Coordinator conducts annual fitness assessments on all sworn personnel, keeping all medical and fitness information confidential. The Fitness Coordinator and employee work together to develop a fitness exercise prescription. Each year this information is assessed by the Fitness Committee in an annual report for the progress of the program, and to ensure the goals are being met.

The annual assessments conducted by the Fitness Coordinator, since the inception of the program, show improvements of the group in almost every measurable category. The data suggests that not only is the physical exercise program improving the health and fitness of the department's sworn staff as a whole, but is encouraging more officers to achieve and maintain a higher level of fitness than before the program began. The

number of officers tested in 1999 was 72; by 2005 the Fitness Coordinator tested 120 officers annually. The mean age of the officers tested is 37, with a mean height of 71 inches. The mean body fat percentage in 2005 for males was 17 percent; for females it was 19.8 percent. The average mean body fat percentage of officers has dropped three percent in six years.

The cardiovascular fitness of the officers showed the mean estimated maximal oxygen consumption (VO₂max) for 1999-2005 as an improvement from 36.8 to 39.8ml/kg/min. The average VO₂max for Americans is 37.2ml/kg/min while elite Olympic athletes tend to have a VO₂max of approximately 60ml/kg/min. The officers in the study group have moved from below the American averages to above them during this six-year period. Beyond the cardiovascular test, the officers are tested for flexibility and strength. The tests used are the sit and reach, abdominal curls, vertical jump, and push-ups. The officers have improved in all four tests over the past six years. The mean flexibility values increased from 16.1 to 18 inches, abdominal curls from 73 to 91, vertical jump from 15.5 to 19.7 inches, and push-ups from 33 to 45. The increase seen in the vertical jump and push-ups is directly related to the officer's continued participation in the fitness program. Having an increase in upper body strength adds to the officer's ability to handle physically challenging tasks that may arise during one's shift. The increase in abdominal strength and flexibility decreases the officer's risk for lower back injuries. Granted this change does not take the officers to a level of Olympic athletes, but is a marked improvement, and demonstrates a healthy level of fitness.

"What does this all mean?" The average body fat of an American male is approximately 22 percent, the average American female 32 percent.⁹ In 2005 the study

group for both men and women was significantly lower than these national averages.

Based on the department averages since 1999, the following observations were made:

- Average body fatness has improved
- The percentage of obese officers, 25 percent body fat, has been reduced
- Muscle fitness values have increased
- Flexibility values for hamstrings and low back have improved
- The percentage of officers with desirable aerobic fitness has improved
- 90 percent of officers have muscle fitness scores average or above for their age group and gender

At the inception of the program the committee anticipated there would be some injuries attributed to the fitness program. Most of the documented injuries have been minor, and the trend in on-duty injuries since the inception of the program is down overall. The overall cost of injuries for the department since the program's inception (\$573,500 in 1997) has been reduced by 85 percent. Many law enforcement agencies are struggling to retain and recruit personnel, but the Roseville Police Department is seeing tremendous success in recruitment and retention, some of which is attributed to the physical fitness program. Several officers recently hired by the Roseville Police Department have offered the "fitness program" is one of the benefits they considered when looking to laterally transfer to a new agency.

The implementation plan of a physical fitness program requires some planning and continued evaluation of the program for results. To begin a program such as the one used by Roseville, some logistical issues must first be addressed. Equipment needs to be purchased, space acquired for the gym, a Memorandum of Understanding agreed upon

between the department and police officer's association, and a police and guidelines must be established.

The initial costs associated with a physical fitness program can be significant. Some of the greatest costs could come from finding a suitable location to establish a gym facility and adequate shower facilities. Fortunately for Roseville, a room of approximately 1200 square feet with adequate changing and showering facilities was available. Other significant costs will come from the purchase of fitness equipment.

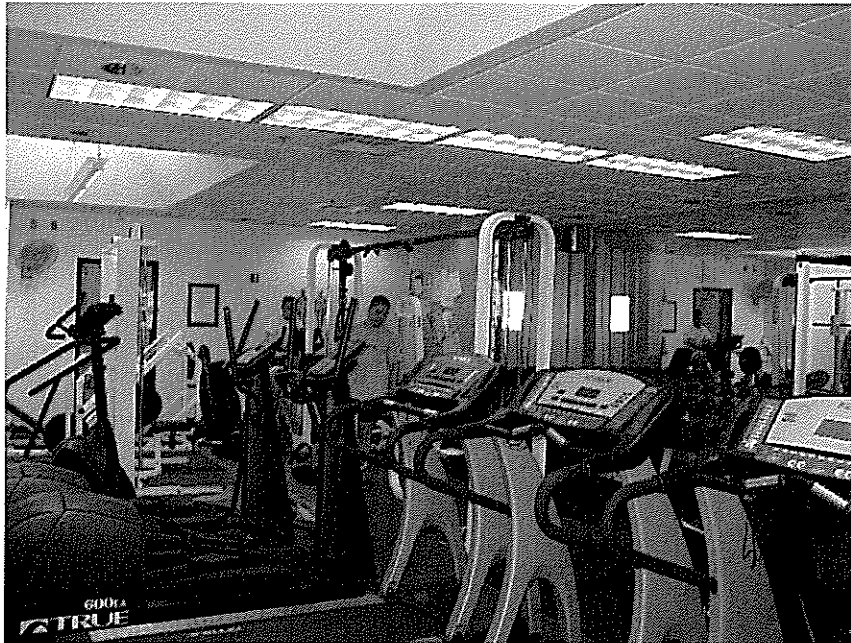
To establish an atmosphere capable of achieving total fitness, a wide range of equipment should be purchased. Below is a list of basic equipment to support a gym able to serve approximately eight to ten officers at one time:

Aerobic Equipment

2 Treadmills	(Approx. \$2500 each)	\$5,000
2 Stationary Bikes	(Approx. \$700 each)	\$1,400
1 Rowing Machine		\$1,800
2 Elliptical Trainers	(Approx. \$1000 each)	<u>\$1,000</u>
Total:		\$10,200

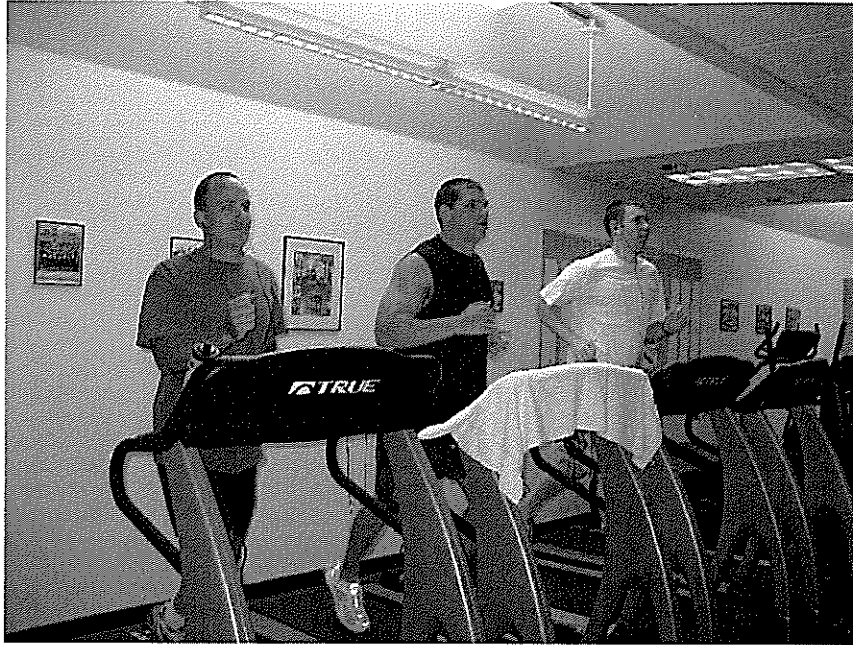
Weight Training Equipment

2 Flat Benches	(Approx. \$100 each)	\$200
Workout Tower		\$150
Leg Press Machine		\$600
Dumbbell Rack with Weights		\$500
Olympic Bench		\$250
Power Rack		\$250
Cable Crossover Machine		\$1,350
Lat Machine		\$400
Smith Machine		\$350
Free Weights	(Approx. \$1 per pound)	<u>\$1,000</u>
Total:		\$4,050



With the equipment listed an organization can outfit a good gym for under \$15,000. One additional cost to consider is for a fitness professional. The Roseville Police Department was able to employ the Fitness Coordinator on a contractual basis for under \$14,000 a year.

Recognizing the initial costs of start up for a fitness program are not cheap, these costs are significantly lower than the cost of one single medical retirement for an officer. The Roseville Police Department, the officers and community have seen a tremendous benefit as a result of the fitness program.



SUMMARY

The Cooper Institute is one of the most notable research organizations with regard to physical fitness, and especially physical fitness and the law enforcement profession. They have found through research maintaining a physical fitness program will enhance employee morale, reduce health care costs, reduce workers' compensation claims, improve productivity, reduce turnover, reduce absenteeism, improve employee recruitment and retention, and increase employee loyalty. The law enforcement profession has seen the need to establish minimum physical standards to be met by applicants, though these standards can vary from agency to agency. One can rationalize then that physical fitness is important and a necessary element to perform the job tasks. Though police officers are not physically challenged every moment of everyday; the impending potential for a violent physical altercation is always present. Due to the stress created by these circumstances and the sudden burst of physical exertion required at times, fitness for officers is essential.

Historically far too many police officers are forced into early retirement due to medical problems and injuries sustained during the course of their employment. When a police officer is hired by a law enforcement agency they spend thousands of dollars and hundreds of man-hours to train and prepare the person for the profession. Over the course of an officer's career there is on-going training and thousands of dollars more spent keeping these officers proficient and developing them in their career. This investment is lost when an officer is forced into early retirement.

Health care costs, workers' compensation costs, and sick leave also place an undue burden on public law enforcement agencies. Health care costs have risen over fifty percent in the last few years; workers' compensation costs have become so outrageous reform has taken place, and sick leave usage costs law enforcement agencies hundreds of thousands of dollars to backfill essential positions. Likewise, if an officer is injured, and that injury creates a lengthy absence, it can also place financial strain on an organization.

The current trend of health care costs seems to be one directional, and that is up. The only true way to impact a trend such as this is to create a healthier client base. In turn having a healthier client base clearly has the potential to decrease workers' compensation costs, and may reduce sick leave usage.

A healthier client base begins with a healthy lifestyle. One very important aspect of that lifestyle is physical fitness. Law enforcement management is responsible for how they spend public funds, and that responsibility goes beyond staffing levels, equipment, training, etc. That responsibility can be related to the funds spent when forced to medically retire a twenty-five year old police officer. It costs a law enforcement agency on average one million dollars to retire such an officer over the course of the officer's

lifetime. For a small law enforcement agency, saving one officer from this type of retirement can mean the difference between the department's ability to continue services or reduce overall staffing due to fiscal challenges.

Modern technology has achieved incredible progress over the past several decades and provided police officers with phenomenal tools, from Mobile Data Computers to an array of Less-Lethal weapons. Even with the invention of these amazing tools the most valuable asset in any law enforcement organization is personnel, and when it comes to the budget of any organization the most expensive commodity are its personnel. Personnel cost far outweigh any other cost in a law enforcement organization; therefore, the health of police officers should be paramount in the eyes of law enforcement management.

Research has clearly established a link between fitness and one's ability to remain healthy and active while reducing the chance of injury brought on by poor physical fitness. The Cooper Institute for Aerobic Research found that when a business has established some form of wellness program, the following list of benefits is usually present:

- Enhanced employee morale and job satisfaction
- Reduced health care costs
- Reduced workers' compensation claims
- Improved productivity
- Reduced turnover
- Reduced absenteeism
- Improved employee recruitment and retention

- Increased employee loyalty⁷

The greatest investment in any law enforcement organization is the professionals dedicated to helping others in our communities. It can take up to a year of academy and in-service training to prepare one to become an officer or deputy, and years more before they achieve the level of expertise needed to cope with the increasing complexity of our profession. This investment in training and equipment has a significant price tag, and the prudent manager will see ways to maximize and protect their investment. A fitness program is one way law enforcement agencies might better serve the goal of staffing their organizations with persons fit to do the job, and healthy enough to stay that way. Doing any less could be worse than doing nothing at all.



END NOTES

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⁴ Violanti, Vena and Petralia, "Mortality of a Police Cohort: 1950-1990", American Journal of Industrial Medicine/ 22, no. 4 1(1997): 366-373.

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